

## CLAIMS:

1. A power amplifier comprising:  
a first stage for amplifying an input signal, and  
a first bias circuit for providing a bias current to the first stage,  
the first bias circuit comprising a controlled current source, and the first bias circuit being  
5 arranged for feeding its bias current to a control electrode of a signal amplification transistor  
of the first stage.

2. The power amplifier according to claim 1, wherein at least one bias circuit  
comprises a non-linear voltage/current converter, preferably coupled with a current mirror.

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3. The power amplifier according to claim 2, wherein the non-linear  
voltage/current converter comprises at least one differential stage coupled to a reference  
voltage, preferably two differential stages, each coupled to a respective reference voltage.

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4. The power amplifier according to claim 1, wherein at least one bias circuit  
comprises two distinct voltage/current converters for converting two distinct gain control  
voltages.

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5. The power amplifier according to claim 1, wherein the first bias circuit further  
comprises bias voltage means for additionally providing a bias voltage to the first stage.

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6. The power amplifier according to claim 1, wherein in the first bias circuit an  
additional transistor is coupled between the voltage/current converter and the controlled  
current source so as to compensate for the DC current gain of the signal amplification  
transistor.

7. The power amplifier according to claim 1, further comprising a second stage for  
amplifying a signal output by the first stage and a second bias circuit for providing a bias

current to the second stage, and optionally a third stage for amplifying a signal output by the second stage and an associated third bias circuit for providing a bias current to the third stage.

8. The power amplifier according to claim 1, arranged for amplifying high

5 frequency signals.

9. A device provided with a power amplifier according to claim 1.